



City of Hamilton
Community Safety Zone Selection Guideline

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1.0 Introduction

A Community Safety Zone (CSZ) is a designated stretch of roadway marked with community safety zone signs which are recognized under Provincial legislation and allows the doubling of fines associated with speeding within the CSZ. Further, the Province of Ontario passed Bill 65, the Safer School Zones Act, which amended the Highway Traffic Act to facilitate the municipal adoption of Automated Speed Enforcement (ASE) technology on roads with speed limits under 80 km/h in designated school zones and CSZ's.

It is recognized that CSZ's help to change driver behaviour, including reducing speeding, distracted driving, and improving safety on roads where public safety is of special concern. This approach is in alignment with Vision Zero principals and the City of Hamilton Mission, Vision, values and goals.

This guideline has been developed to assist with the selection of CSZ's and is intended to provide a consistent, repeatable, transparent and defined method for designation and aid in responding to requests from Council and the public.

Scored ranking criteria is used to take roadway characteristics into account such as daily traffic volume, vehicle operating speed, pedestrian volumes, collision history, and the presence (or lack of) multi-modal amenities to determine areas that would benefit from being designated as a CSZ. The ranking of locations that meet the guideline will ensure that roadways with a greater number of vulnerable road users and higher exposures to roadway safety risk factors will receive priority designation.

This document is based on Provincial guidelines for the implementation of ASE and is comparable to criteria that is used by other municipalities in Ontario.

2.0 Selection Criteria

The Community Safety Zone Selection Guideline includes three criteria categories which are a) Risk Exposure, b) Collision Activity and c) Built Environment. Combined, the total score attained from review of each category is used to rank outcomes of reviewed roadways and prioritizes the implementation of CSZ designations.

2.1 Risk Exposure

Candidate locations are generally roadways with measurable poor speed limit compliance. In order to affect the largest population of drivers and benefit the largest number of vulnerable road users, a risk exposure index component is included in the site selection ranking. Risk exposure includes vehicle volume, 85th percentile vehicle speed, length of CSZ/school zone, school population and after school hour outdoor use data elements. While ASE may only be used during school hours, the after-hour use of the candidate location is an important exposure factor and is therefore included. The following ratings and weights, shall be utilized to obtain a scoring rank for the risk exposure criteria:

Table 2.1 – Risk Exposure Criteria

Component	Range	Rating	Weight
Traffic Volume (AADT)	< 1,000 v.p.d	1	3.0
"	1,001 to 3,000 v.p.d	2	
"	3001 to 5,000 v.p.d	3	
"	> 5,000 v.p.d	4	
Travel Speed	85 th percent - posted < 10 km/h	1	4.0
"	85 th percent - posted = 11 to 20 km/h	2	
"	85 th percent - posted = 21 to 30 km/h	3	
"	85 th percent - posted > 31 km/h	4	
Length of Zone	< 100 m	1	1.0
"	101 - 200 m	2	
"	201 - 300 m	3	
"	> 301 m	4	
School Population	<400 students	1	2.0
"	401 - 900 students	2	
"	901 - 1200 students	3	
"	> 1201 students	4	
After Hour Use	no	0	1.0
	yes	1	
2.1 Risk Exposure Total Score:			

2.2 Collision Activity

Collision history of candidate locations is an important consideration, however not all collisions are considered to have been speed related. Pedestrian - motor vehicle collisions and cyclist - motor vehicle collisions are included in the ranking process.

Collision data verification is required to determine which historical collisions occurred within the candidate location and which occurred beyond the zone. Rating only pedestrian – motorist and cyclist – motorist collisions equalizes local, collector and arterial roadways to some degree as arterial roadways tend to have higher numbers of collisions and more collision types than the lesser roadway classifications. The following ratings and weights, shall be used to obtain a scoring rank for the collision activity criteria:

Table 2.2 – Collision Activity Criteria

Component	Range	Rating	Weight
Prior 3 years Pedestrian - Motorist Collisions Only	0	0	4
"	1	2	
"	2	3	
"	3	4	
"	> 3	5	
Prior 3 years Cyclist - Motorist Collisions Only	0	0	4
"	1	2	
"	2	3	
"	3	4	
"	> 3	5	
2.2 Collision Activity Total Score:			

2.3 Built Environment

The absence of sidewalks, the presence of on-street bike lanes, the presence of on-street parking (whether permitted or prohibited), proximity to parks, the curvature of the roadway within and immediately adjacent to the candidate location and the presence of a speed limit transition within one kilometer of the candidate location are all factors which impact the comfort and safety of vulnerable road users. The applied scored criteria ensure that the environment of the candidate zone is reflected in the selection process. The following ratings and weights, shall be utilized to obtain a scoring rank for the built environment criteria:

Table 2.3 – Built Environment Criteria

Component	Range	Rating	Weight
Sidewalks	Both Sides	0	2.0
"	One Side Only	1	
"	None	2	
Bike Lanes	Both Sides	0	2.0
"	One Side Only	1	
"	None	2	
On Street Parking	None	1	1.0
	Present Although Prohibited	2	
	Present and Permitted	3	
Adjacent to Park	No	0	1.0
	Yes	3	
Roadway Curvature	None	0	2.0
	Present	1	
Speed Transition	None	0	2.0
	Present	1	
2.3 Built Environment Total Score:			

3.0 Application

Each of the three criteria categories (Risk Exposure, Collision Activity and Built Environment) shall be examined and total scores for each calculated, all three scores shall be combined to attain the total score for the candidate location.

Table 3.0 – Candidate Location Score

Criteria Category	Score
2.1 Risk Exposure Total Score:	
2.2 Collision Activity Total Score:	
2.3 Built Environment Total Score:	
Candidate Location Total Score:	

3.1 Minimum Score

A candidate location must achieve a minimum of 25 points in order to be considered for the designation of a CSZ.

3.2 Additional Influential Considerations

Other location specific considerations should be examined in addition to the scored criteria to determine if they should influence the priority ranking of the candidate location. These considerations include other vulnerable road users, types of schools, whether children or other vulnerable road users cross the road, percentage of students being driven to school versus walking, police and public input and whether schools have programs to actively encourage walking. Additional influential considerations shall be well documented and when viewed as elevating the priority of the candidate location, a validated explanation documented and provided.

3.3 Physical Feasibility Review

Prior to finalizing a candidate location's score and prioritization listing, a site audit must be conducted to ensure there are no physical impediments that may prevent or restrict the designation of a CSZ, including the full functionality of ASE equipment.

At a minimum, the following criteria should be reviewed at all candidate locations:

- There are no physical obstructions to signage or ASE equipment including on-street parking;
- If the location involves a change in the posted speed limit, the ability to accommodate a sufficient buffer;
- There is adequate boulevard space to accommodate ASE equipment; and
- There are no sharp curves in the road or extreme grading that may affect the operation of ASE equipment.

4.0 Ranking & Prioritization

Transportation Operations & Maintenance Division, Transportation Operations Section will maintain a master database of candidate location rankings, which shall be directly based upon the three criteria categories contained in the Community Safety Zone Selection Guideline. The database will contain the scored results for each candidate location and the total score attained. The ranking shall be sorted by highest scoring first and lowest scoring candidate locations last, additionally, a pass/fail indicator will be clearly established.

Additional influential considerations shall be included, and supplemental descriptions and documentation retained. A priority increase in ranking in the database shall be by approval by the Director after an assessment of information provided. Candidate locations that are given different ranking prioritization beyond the base criteria score must include a clear indicator on the master database.

5.0 Implementation

Implementation, meaning the formal designation of a CSZ via inclusion in the Traffic By-law and posting of signage, shall be incorporated into the Vision Zero Action Plan annual activities or as deemed necessary by the routine review of roadway safety.

The ASE pilot project, and/or future permanent establishment of an ASE program, will be coordinated with the implementation of CSZ's as required to support the pilot/program.